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Ease of Figure Reversal And Creativity

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Introduction

- Figure-ground reversal is an intriguing phenomenon in which the perception of existing ambiguous figures changes by switching focus from the foreground and background of the image.
- Divergent thinking involves strategies used to complete open-ended tasks. (J. P Guilford)
- Some researchers have found a correlation between divergent thinking and figure reversal.(Wiseman et al 2011)
- Besides divergent thinking, insight creativity has also been researched using tests such as the Remote Associates Test. (RAT) created in the 1960s by Sarnoff Mednick to measure convergent thinking.
- Unlike divergent thinking, when measuring convergent thinking the individual gives one response with only one correct answer.
- Knowing that the ease of figure reversal can be related to creativity, the purpose of this research was to find out if the ease of figure reversal is more strongly correlated with divergent thinking as opposed to insight creativity.

Methods

- An online survey was taken by thirty participants but only fully completed by twenty-eight.
- The survey was created using Qualtrics and incorporates three sections for self-reported creativity, insight creativity, and alternative uses test.
- The self-reported section is an adaptation of the Creativity and ease of ambiguous figural reversal study. (Wiseman et al., 2011)
- The survey is also an adaptation of the Remote Associates Test, (Phineas Molaison, 2020).
- The shortened version of Guilford's Alternative Uses Task (Guilford et al., 1978), was used in this survey to measure insight creativity.
- Using excel, the correlation significance was determined by Pearson-correlation. Therefore, the ease of figure reversal was analyzed with the RAT score, and the AUT score to find the correlation coefficients.

Results

- The strongest correlation was found between divergent thinking and ease of figure reversal (0.391714).
- A lower positive correlation was found between insight creativity and ease of figure reversal. (0.307675).
- Participants who were able to reverse figures with ease were found able to list more uses than others on the AUT test.

Q14 - What images did you see based on the given choices?

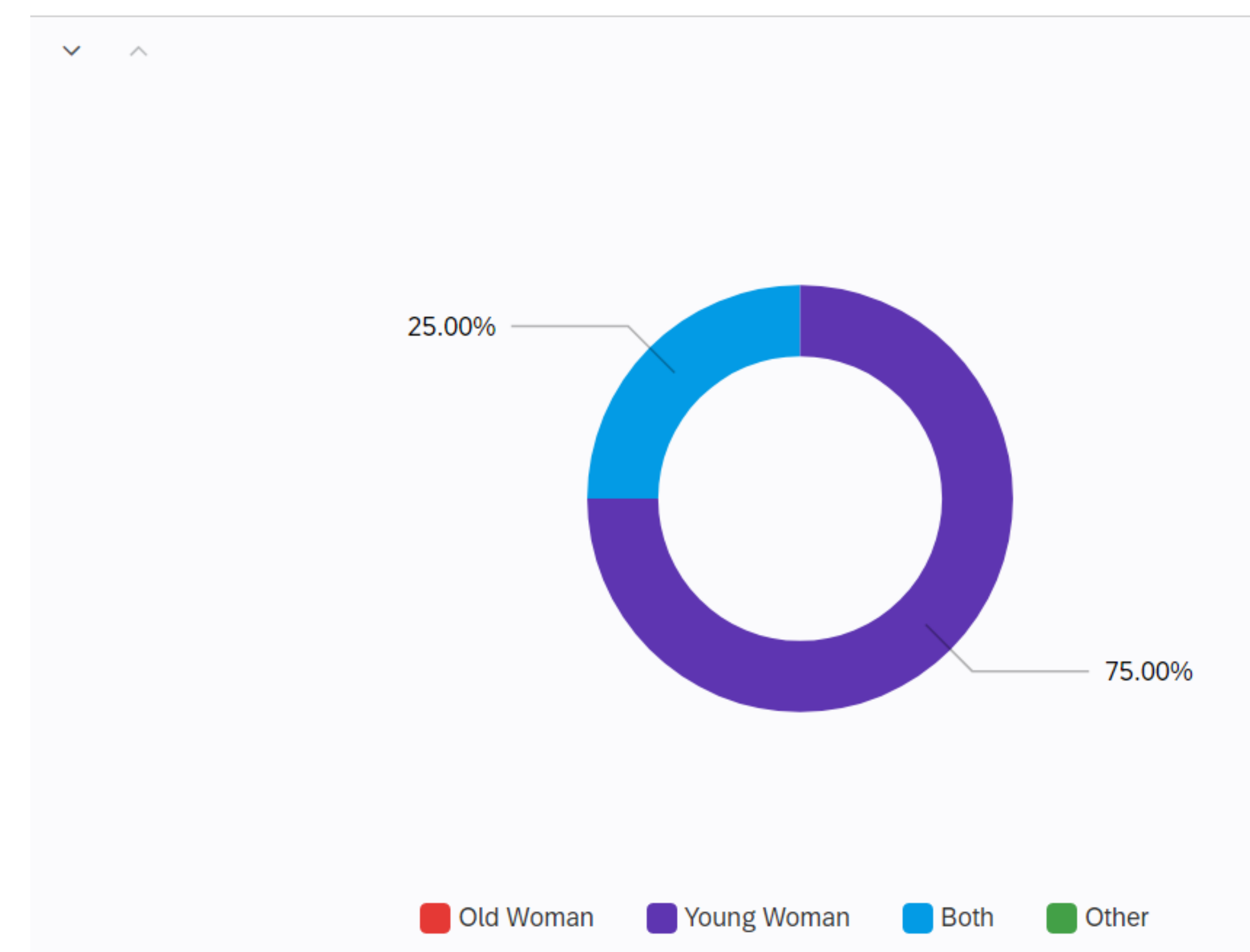


Figure 1. Visual depiction of the 30 responses given after viewing the old-young woman figure reversal for 30 seconds

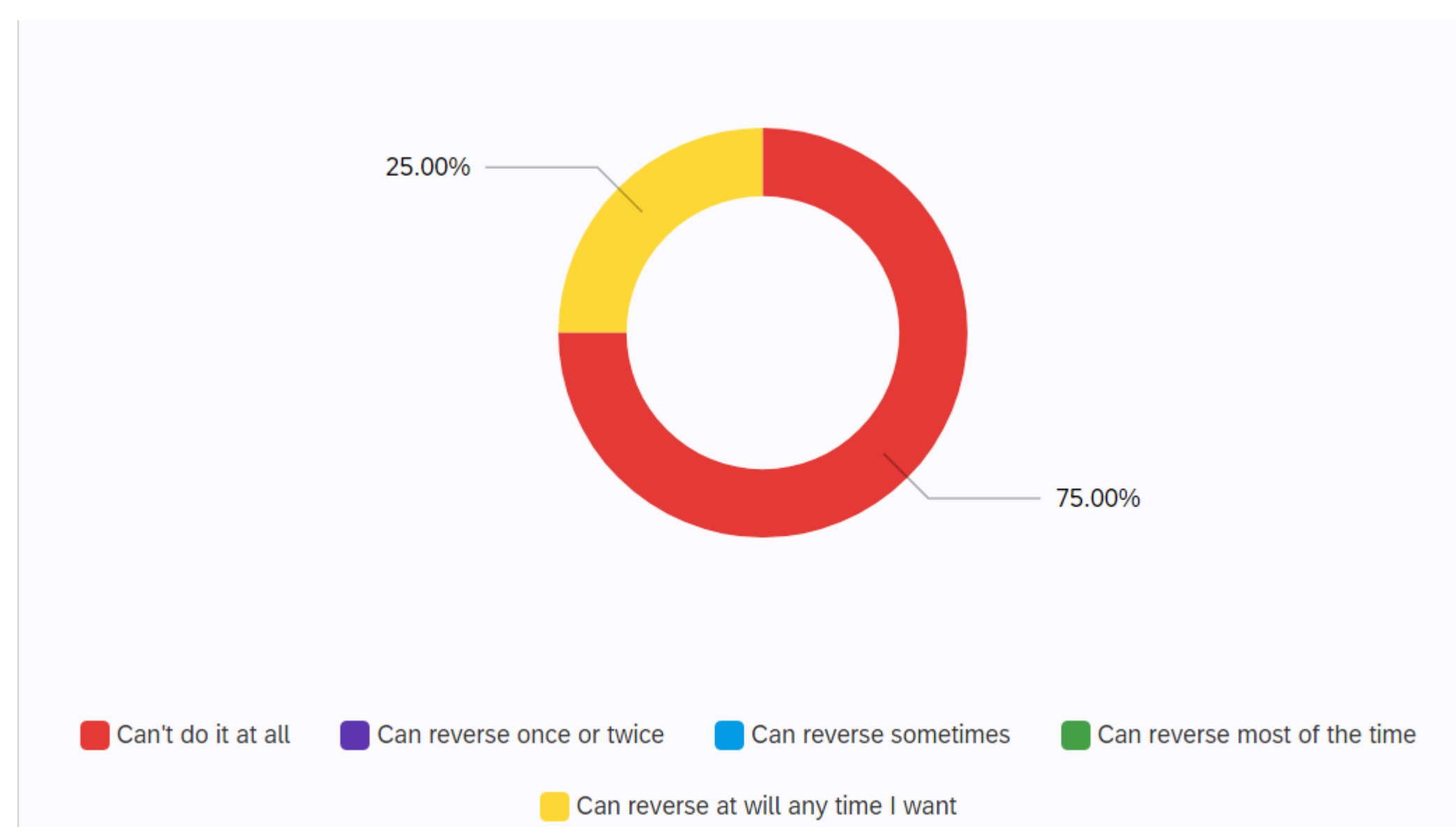
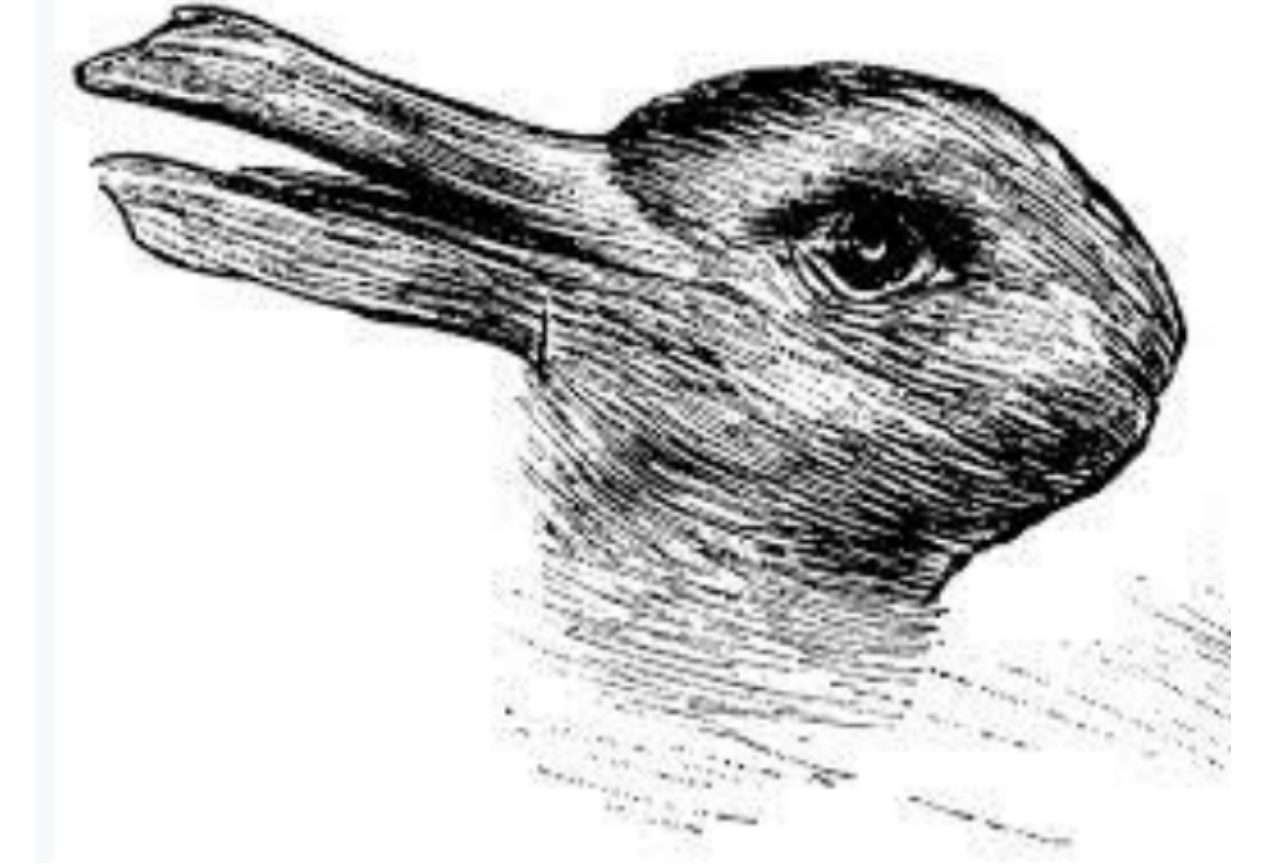


Figure 2. Summary of responses on the ease of figure reversal given the old-young woman image.



cottage / swiss / cake
cream / skate / water
night / wrist / stop
rocking / wheel / high
safety / cushion / point

Conclusions

- While divergent thinking is more correlated with the ease of figure reversal, it is not necessary the primary factor.
- The limitations of this experiment could be due to the participant sample, images, and timing.
- Besides the images used, another limitation is the timing of the AUT tests and the RAT tests. For the AUT and the RAT tests, participants were given thirty seconds which could be increased for future studies.
- While this study produced a moderate correlation between ease of figure reversal and divergent thinking, future research should include more time and be conducted with less familiar figure reversal images to determine if familiarity besides creativity also affects the ease of figure reversal.

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